

AMENDMENTS TO THE CLAIMS

The listing of the claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A method comprising:
receiving content for transmission from a plurality of three or more transmit antennae;
and
generating a rate-one, space-frequency code matrix from the received content for transmission via the plurality of three or more transmit antennae to a plurality of receive antennae, wherein the plurality of three or more transmit antennae provide full space-frequency diversity of $M*N*L$, where M is a number of transmit antenna, N is a number of receiver antenna, L is ~~order of frequency selective channel~~ a number of matrix channel taps.

2-23. (Cancelled)

24. (New) The method of claim 1, wherein the received content is a vector of input symbols of size $N_c \times 1$, wherein N_c is the number of subcarriers of the multicarrier wireless communication channel.

25. (New) The method of claim 24, wherein generating a rate-one space frequency code matrix comprises:

dividing the vector of input symbols into a number G of groups to generate subgroups;
and

multiplying at least a subset of the subgroups by a constellation rotation precoder to produce a number G of pre-coded vectors (\mathbf{v}_g).

26. (New) The method of claim 25, further comprising:

dividing each of the pre-coded vectors into a number of $LM \times I$ subvectors; and

creating an $M \times M$ diagonal matrix $D_{\mathbf{s}_g, k} = \text{diag}\{\Theta_{M \times (k-1)+1}^T \mathbf{s}_g, \dots, \Theta_{M \times k}^T \mathbf{s}_g\}$, where $k=1 \dots L$

from the subvectors.

27. (New) The method of claim 26, further comprising:

interleaving the L submatrices from the G groups to generate an $M \times N_c$ space-frequency matrix.